

Notice of Allowability

Application No.

10/698,690

Examiner

Carmelo Oliva

Applicant(s)

CONN

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 31 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 10/31/03 & 8/30/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

NOTICE OF ALLOWABILITY

Reasons for Allowance

1. Claims 1-21 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claims 1-18 are allowable because the prior art alone or in combination does not teach or fairly suggest an assembly comprising an integrated circuit die, a package, and a capacitive interposer (caposer), the caposer having first and second conductive layers/bypass capacitor and a through-hole, wherein the signal conductor of the integrated circuit die is coupled to the landing pad through the through-hole without being coupled to the first or second conductive layer/plates of the bypass capacitor, taken in combination with the other claimed features.

Claims 19 and 20 are allowable because the prior art alone or in combination does not teach or fairly suggest a structure comprising an integrated circuit die with a signal conductor and a package housing the integrated circuit die, the structure having means for supplying a bypass capacitor within the package such that the signal conductor is coupled to the landing pad without being coupled to the bypass capacitor, taken in combination with the other claimed features.

Claim 21 is allowable because the prior art alone or in combination does not teach or fairly suggest a structure having a rectangular tile shape comprising first and second conductive plates with a dielectric layer therebetween, through holes extend through the first and second conductive plate and the dielectric layer, wherein neither

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the first nor second conductive plate extends to the inside surface of at least one of the through-holes, the structure being less than 100 microns thick, taken in combination with the other claimed features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Closing

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Parker et al., Gilliland et al., Chakravorty et al., and Ho et al. all show packages having interposers.
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carmelo Oliva whose telephone number is (571)272-1982. The examiner can normally be reached flexible hours on Monday through Friday with every other Wednesday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard, can be reached at (571)272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


DEAN A. REICHARD
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